

## Memorandum

Date: July 31, 2001  
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To: William Keese, Presiding Member  
Robert Pernell, Associate Member

From: California Energy Commission  
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Kae C. Lewis, Project Manager

Subject: RUSSELL CITY ENERGY CENTER (01-AFC-7) ISSUE IDENTIFICATION REPORT

Attached is the staff's Issue Identification Report. This report serves as a preliminary scoping document as it identifies the issues the Energy Commission staff believe will require careful attention and consideration. Energy Commission staff will present the Issues Report at a scheduled Information Hearing on August 7, 2001, at 5:30 p.m. in City Hall, 777 B Street, Hayward, California, 94510.

Part of this report deals with scheduling issues. The Energy Commission is reviewing the Russell City Energy Center Project pursuant to the expedited six-month Application for Certification (AFC) process set forth by Public Resources Code section 25550.

### Attachments

cc: Alex Ameri, City of Hayward  
Keith Lichten, SF Regional Water Quality Control Board  
Waymen Lee, Bay Area Air Quality Management District

**ISSUE IDENTIFICATION REPORT**  
**RUSSELL CITY ENERGY CENTER PROJECT**  
**(01-AFC-7)**

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## PURPOSE OF REPORT

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This report has been prepared by the California Energy Commission staff to inform the Committee and all interested parties of the potential issues that have been identified in the case thus far. Issues are identified as a result of discussions with federal, state, and local agencies, and our review of the Russell City Energy Center Project Application for Certification (AFC), Docket Number 01-AFC-7. This Issue Identification Report contains a project description, summary of potentially significant environmental issues, and a discussion of the proposed project schedule. The staff will address the status of potential issues and progress towards their resolution in periodic status reports to the Committee.

## PROJECT DESCRIPTION

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Calpine/Bechtel Joint Development (CBJD) proposes to construct and operate an energy generating facility known as the Russell City Energy Center (RCEC) in the City of Hayward (Alameda County). The facility will be a natural gas-fired, combined cycle plant with the nominal gross generating capacity of 600 megawatts (MW). The proposed electric generating facility will be located in the southwest corner of the intersection of Enterprise Avenue and Whitesell Street, directly south of the City of Hayward's Water Pollution Control Facility (WPCF).

The proposed facility will include two "F-class" combustion turbine generators (CTGs) and two heat recovery steam generators (HRSG), a single steam turbine-generator (STG), and a hybrid, wet/dry mechanical draft cooling tower. Each HRSG unit will have 145 foot exhaust stacks and will be equipped with duct burners for additional steam production when increased electric power generation is necessary.

Natural gas will be supplied from a 0.9 mile pipeline that will be constructed to deliver fuel from Pacific Gas and Electric Company's (PG&E) pipeline number 153 located along the Union Pacific Railroad corridor.

The combined cycle units are proposed to use a maximum of 3.3 million gallons per day (gpd) or 3,730 acre feet per year. The cooling and process water used at RCEC will consist of secondary effluent (wastewater) supplied by the City of Hayward's Water Pollution Control Facility (WPCF) located across from the plant site. This water will be delivered from WPCF to a new advanced wastewater treatment plant (AWT) which will supply tertiary effluent water to the plant (secondary effluent is not appropriate for power generating operations without additional treatment). The AWT will be built by the project and ultimately owned and operated by the City of Hayward. Cooling wastewater from the plant will subsequently be delivered to the WPCF. A backup supply of secondary effluent is proposed to be delivered from the East Bay Discharge Authority pipeline. Water for drinking and other domestic uses will be supplied from the City of Hayward. Pipelines will be constructed from the WPCF to the AWT and the plant and a wastewater return from the plant to the WPCF.

The RCEC will interconnect with the electrical grid from a switchyard built on the plant site which connects to the PG&E Eastshore Substation south of State Route 92. The

proposed transmission line is a 1.1 mile 230-kilovolt (kV) double-circuit overhead line which will share new towers with the existing Eastshore-Grant 115 kV transmission line.

To control emissions of air pollutants, the RCEC will have gas turbines with dry, low nitrogen oxides (NOx) burners. The units will use the best available control technology (BACT) including selective catalytic reduction (SCR) for control of NOx. The SCR system consists of a reduction catalyst and an aqueous ammonia injection system. In addition, the RCEC is required by the Bay Area Air Quality Management District to provide emission reduction credits for NOx and precursor organic compounds (POC).

CBJD proposes construction to begin on the project in the summer of year 2002 and take approximately 18 to 21 months. Commercial operation of RCEC and the AWT is expected to begin by the summer of year 2004. The construction force necessary for RCEC is expected to peak at 485 workers in month 15. Once the new units are on line, the operational staff required is expected to be about 25 employees. The capital cost of the RCEC project is expected to be between \$300 and \$400 million.

## **POTENTIAL MAJOR ISSUES**

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This portion of the report contains a discussion of the potential issues the Energy Commission staff has identified to date. This report may not include all the significant issues that may arise during the case, as discovery is not yet complete, and other parties have not had an opportunity to identify their concerns. The identification of the potential issues contained in this report was based on our judgement of whether any of the following circumstances will occur:

- Significant impacts may result from the project which may be difficult to mitigate;
- The project as proposed may not comply with applicable laws, ordinances, regulations or standards (LORS);
- Conflicts may arise between the parties about the appropriate findings or conditions of certification for the Commission decision that could result in a delay to the schedule.

The following table lists all the subject areas evaluated and notes those areas where the potential significant issues have been identified and where data requests have been requested. Even though an area is identified as having no potential issues, it does not mean that an issue will not arise related to the subject area.

| Potential Issue | Data Req | Subject Area               | Potential Issue | Data Req | Subject Area             |
|-----------------|----------|----------------------------|-----------------|----------|--------------------------|
| No              | Yes      | Air Quality                | No              | No       | Public Health            |
| No              | Yes      | Biological Resources       | Yes             | Yes      | Socioeconomics           |
| No              | Yes      | Cultural Resources         | No              | Yes      | Traffic & Transportation |
| No              | Yes      | Reliability/Efficiency     | No              | No       | Transmission Safety      |
| No              | No       | Facility Design            | No              | No       | Transmission Sys. Eng.   |
| No              | No       | Geological/Paleo Resources | Yes             | Yes      | Visual Resources         |
| No              | No       | Hazardous Materials        | No              | No       | Waste Management         |
| No              | Yes      | Land Use                   | No              | Yes      | Water & Soils            |
| No              | Yes      | Noise                      | No              | No       | Worker safety            |

## SOCIOECONOMICS

Based on a preliminary assessment of demographic data for a 6-mile radius surrounding the proposed Russell City Energy Center site, there could be a potential for environmental justice issues. The majority of the census tracts located to the north and east of the proposed project site are composed of populations that are 50% or more minority in composition. Out of these census tracts, thirteen are composed of 75% or more minority populations. It should be noted that the census tract where the project site is situated is composed of less than 50% minority populations.

Given the high minority percentages within a 6-mile radius of the project site, there could be potentially significant impacts to these populations. If any significant impacts are ultimately identified by the air quality, public health, hazardous materials, and noise analyses, the technical staff in these areas will determine the potential for any disproportionate impact and provide mitigation as appropriate.

## VISUAL RESOURCES

Calpine/Bechtel has taken the approach of designing the proposed Russell City Energy Center (RCEC) in an attractive manner rather than attempting to reduce its visibility. According to the AFC, the intent of the architectural treatment for the RCEC is "to simplify the complexity of the plant's equipment and create a unified visual element that has a sculptural quality." The City of Hayward has indicated its initial support in concept of architectural treatment for the facility and has indicated an interest in working with the applicant to develop the best possible architectural design.

Staff does not take issue with the architectural treatment approach in principle. However, the large, prominent architectural screening structure (referred to as the "Wave") will be in a direct line of sight with Mount Diablo from the nearby Hayward Shoreline Interpretive Center, substantially blocking the view of the mountain from the center's observation decks. According to the AFC, the Hayward Shoreline Interpretive Center provides ecological education programs for school children (about 4,500 annually) and serves as a

staging area for visitors (about 200 to 250 people daily) using the network of hiking and biking trails in the adjacent Hayward Shoreline Marsh and Hayward Regional Shoreline.

Staff considers this effect to be a potentially significant adverse visual impact under the criterion set forth in Appendix G of the CEQA Guidelines, which reads: "Would the project have a substantial adverse effect on a scenic vista?" The AFC does not identify the impact as significant, and consequently, no mitigation is proposed. However, the AFC states that the Applicant "will donate funds to the Hayward Area Recreation and Park District (HARD) for providing benches and other amenities on its trail system" northwest of the Interpretive Center where views toward Mount Diablo will not be affected by the RCEC. Staff will work with the Applicant, HARD, and the City of Hayward to determine if appropriate mitigation is available and/or if an alternative architectural treatment would achieve the stated goals, but preserve as much of the Interpretive Center's view of Mount Diablo as possible.

## **CITY OF HAYWARD PARTICIPATION**

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The City of Hayward is a critical participant in the AFC process for the RCEC project. The City will play a significant role as the proposed owner and operator of the Advanced Water Treatment (AWT) facility supplying water to RCEC. The project will be analyzed by staff for consistency with City of Hayward's standards and ordinances because of the City's role of local jurisdiction. At this point in the project, the City has specific concerns which include the following:

- project's impacts on wetlands
- potential impacts of electromagnetic fields on construction and operations workers
- safety of the proposed plant in a seismic event
- obligations of the applicant in plant decommissioning
- public health impacts of the project's air emissions
- potential impacts of the project on traffic at the intersection of Clawiter/State Route 92 and on current construction projects in the area
- visual impacts of the project's architectural design and plume visibility
- project's consistency with requirements of the City's National Pollutant Discharge Elimination System (NPDES) permit

## **SCHEDULING ISSUES**

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Staff has begun its analyses of the project and is currently in the discovery phase. Staff is collecting information through data requests, workshops, and site visits which will be utilized in its assessment of environmental and engineering aspects of the applicant's proposal. At this juncture, on the basis of the above information, staff recommends that the Committee find that the project continues to qualify for the six-month process.

Following is staff's proposed schedule for key events of the project. The ability of staff to be expeditious in meeting this schedule will depend on factors which include the applicant's timely response to staff's data requests, the filing of Determination of Compliance from the air district, and approval from the Independent System Operator (Cal-IS0).

### Staff's Proposed Schedule for Russell City Energy Center

| DATE               | DAYS        | EVENT  |
|--------------------|-------------|--|
| 5/22/01            | -           | Russell City Energy Center (RCEC) AFC filed (01-AFC-7)   |
| 7/11/01            | 0           | Energy Commission Deems AFC Complete   |
| 7/25/01            | 14          | Staff files Data Requests  |
| 7/31/01            | 21          | Staff files Issue Identification Report  |
| 8/7/01             | 28          | Information Hearing & Site Visit   |
| 8/13/01            | 34          | Data Responses Due From Applicant  |
| 8/20/01            | 41          | Data Response and Issue Workshop   |
| 9/10/01            | 60          | CAL-ISO provides preliminary approval of Facilities Study  |
| 9/10/01            | 60          | Bay Area Air Quality Management District (BAAQMD) files Preliminary Determination Of Compliance (PDOC) |
| 9/24/01            | 75          | Staff files Staff Assessment (SA)  |
| 10/11-<br>10/15/01 | 97          | Staff holds SA workshop(s)   |
| 10/18/01           | 100         | BAAQMD files Final DOC   |
| 10/29/01           | 110         | Staff files addendum to SA (if necessary)  |
| 11/8-<br>11/9/01   | 120-<br>121 | Evidentiary Hearings   |
| 12/3/01            | 145         | Committee issues Presiding Member's Proposed Decision  |
| 1/7/02             | 180         | Commission Adopts Decision   |